



Australian Bureau of Statistics

2080.0 - Microdata: Australian Census Longitudinal Dataset, 2006-2011 Quality Declaration

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INTRODUCTION

The Australian Census Longitudinal Dataset (ACLD) brings together a 5% sample from the 2006 Census with records from the 2011 Census to create a research tool for exploring how Australian society is changing over time. In taking a longitudinal view of Australians, the ACLD may uncover new insights into the dynamics and transitions that drive social and economic change over time, conveying how these vary for diverse population groups and geographies. It is envisaged that the 2016 and successive Censuses will be added in the future, as well as administrative data sets. The ACLD is released in ABS TableBuilder and as a microdata product in the ABS Data Laboratory.

The Census of Population and Housing is conducted every five years and aims to measure accurately the number of people and dwellings in Australia on Census Night.

Microdata products are the most detailed information available from a Census or survey and are generally the responses to individual questions on the questionnaire. They also include derived data from answers to two or more questions and are released with the approval of the Australian Statistician.

AVAILABLE PRODUCTS

The following microdata products are available for this longitudinal dataset:

- ACLD in TableBuilder - an online tool for creating tables and graphs.
- ACLD in ABS Data Laboratory (ABSDL) - for in-depth analysis using a range of statistical software packages.

Further information about TableBuilder and the ABSDL, and other information to assist users in understanding and accessing microdata in general, is available from the Microdata Entry Page. Before applying for access to TableBuilder, users should read and familiarise themselves with the information contained in the User Manual: TableBuilder.

APPLYING FOR ACCESS

To apply for access to TableBuilder, please register and apply in the Registration Centre.

Information on TableBuilder access can be found on the How to Apply for Microdata page on the ABS web site.

If you are already a registered TableBuilder user [Login here](#).

To apply for access to the ACLD in ABSDL, please contact Microdata Access Strategies via microdata.access@abs.gov.au.

Information on the ABSDL can be found on the [About the ABSDL](#) page on the ABS web site.

SUPPORT

For support in the use of this product, please contact Microdata Access Strategies on 02 6252 7714 or via microdata.access@abs.gov.au.

DATA AVAILABLE ON REQUEST

Customised tables are available on a fee-for-service basis. A consultancy service is available for complex analysis and modelling. For further information, contact the National Information and Referral Service on 1300 135 070 or email client.services@abs.gov.au.

INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070, or email client.services@abs.gov.au. The ABS Privacy Policy outlines how the ABS will handle any personal information that you provide to us.

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SAMPLE METHODOLOGY

SCOPE AND COVERAGE

LINKING METHODOLOGY

WEIGHTING, BENCHMARKING AND ESTIMATION

SOURCES OF ERROR

DATA CONSISTENCY

SCOPE AND COVERAGE

The ACLD is a random 5% sample of persons enumerated in Australia on Census Night, 8 August 2006 which has been linked using statistical techniques to records from the 2011 Census, conducted on 9 August 2011. The Census covers all areas in Australia and includes persons living in both private and non-private dwellings but excluding:

- diplomatic personnel of overseas governments
- persons who expected to be usually resident in Australia for less than six months
- Australian residents overseas on Census Night

Overseas visitors are excluded for the 2006 ACLD sample. Visitors within Australia to private and non-private dwellings on Census Night are included.

For more information on the scope and coverage of the Census:

- 2903.0 - How Australia Takes a Census, 2006
- 2903.0 - How Australia Takes a Census, 2011

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LINKING METHODOLOGY

Data from the 2006 ACLD sample and the 2011 Census were brought together using data linkage techniques. The method involved linking without the use of name and address, as this information is destroyed at the end of each Census processing cycle.

Data linkage is typically undertaken using probabilistic and/or deterministic methods, both of which were used in forming the ACLD:

- Probabilistic: linkage is based on the level of overall agreement on a set of variables common to the two datasets. This approach allows links to be assigned in spite of missing or inconsistent information, providing there is enough agreement on other variables to offset any disagreement.
- Deterministic: linkage involves assigning record pairs across two datasets that match exactly or closely on common variables. This type of linkage is most applicable where the records from different sources consistently report sufficient information and can be an efficient process for conducting linkage.

Variables on the 2006 and 2011 Census files used for linking include:

- Age
- Sex
- Date of birth
- Indigenous status
- Birthplace
- Year of arrival
- Marital status
- Level of qualification
- Field of qualification
- Highest year of school completed
- Occupation
- Religion
- Language spoken
- Mother's age
- Mother's day and month of birth
- Father's age
- Father's day and month of birth
- Meshblock
- Statistical Areas 1, 2 and 4

A number of linkage passes were conducted based on different combinations of variables to ensure each record had the highest possible chance of being linked. At the end of the linkage process, 800,759 (82%) of the 979,661 sample records from 2006 were linked to a 2011 Census record.

There were two reasons why some records from the 2006 Census were not linked to a 2011 record:

1. Records belonging to the same individual were present at both time points but these records failed to be linked because they contained missing or inconsistent information.
2. The person had no record in the 2011 Census.

For detailed information on the linking methodology and an assessment of its quality see Australian Census Longitudinal Dataset, Methodology and Quality Assessment (cat. no. 2080.5).

Variables relating to migrants from the Department of Social Services' Settlement Database have been included into the ACLD. These have been taken from an existing linkage between the Australian Census and Migrants Integrated Dataset. For information on the linking methodology of Settlement Database variables see Australian Census and Migrants Integrated Dataset Linking Methodology (cat. no. 3417.0.55.001).

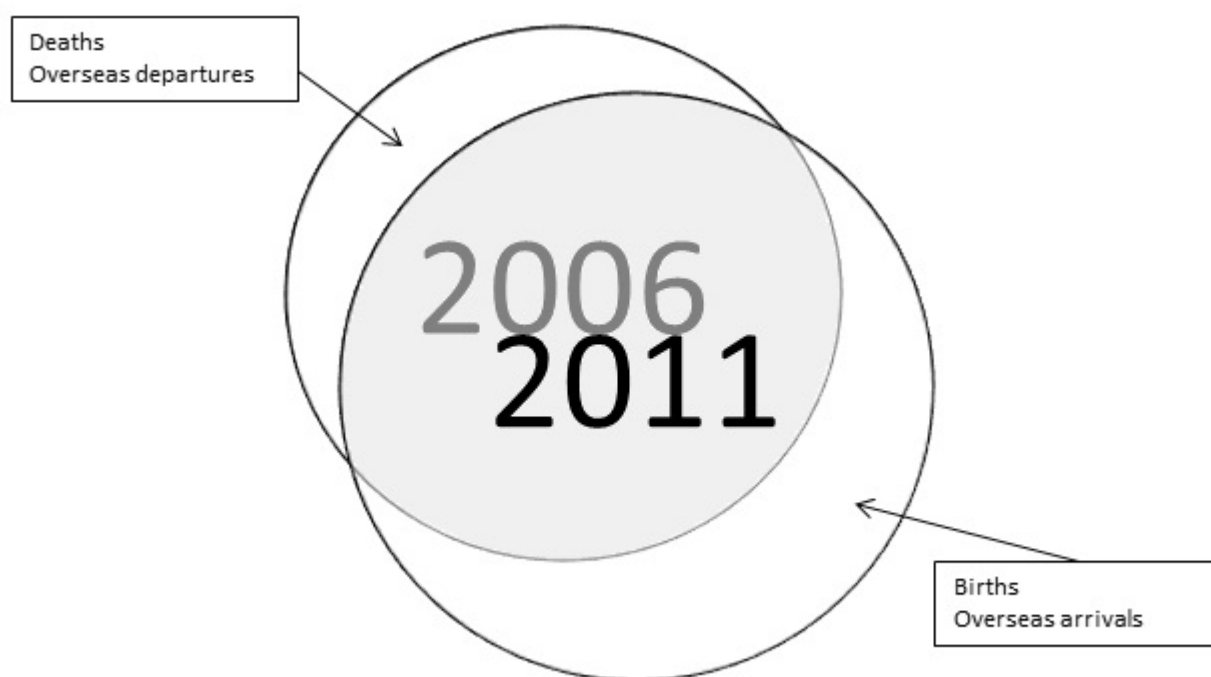
WEIGHTING, BENCHMARKING AND ESTIMATION

Weighting

Weighting is the process of adjusting a sample to infer results for the relevant population. To do this, a 'weight' is allocated to each sample unit - in this case, persons. The weight can be considered an indication of how many people in the relevant population are represented by each person in the sample. Weights were created for linked records in the ACLD to enable longitudinal population estimates to be produced. Cross-sectional population estimates for 2006 and 2011 are available from each Census.

The ACLD began as a random sample of 5% of the Australian population in 2006. As such, each person in the sample should represent about 20 people in the population. Between Censuses, however, the in scope population changes as people die or move overseas. In addition, Census net undercount and data quality can affect the capacity to link equivalent records across waves. The ACLD weights benchmarked the linked records to the population that was in scope of both the 2006 and 2011 Censuses. The weights were based on four components: the design weight, undercoverage adjustment, missed link adjustment and population benchmarking.

The original population benchmark was the 2011 Estimated Resident Population (ERP). The 2011 ERP was chosen over the 2006 ERP as the baseline population as it is more recent. The 2011 ERP was then adjusted so as to exclude people who were not in Australia in 2006 as depicted below.



Weights were benchmarked to the following population groups:

- state/territory by age (ten year groups) by sex by mobility (interstate arrivals benchmarked separately)
- Indigenous status by state/territory

At 12 February 2016 a new weight was applied to the ACLD file to better account for overseas departures and arrivals between 2006 and 2011. Users who have analysed the ACLD prior to 12 February 2016 may notice changes to estimates produced with the revised weight. Estimates of population groups will be different with the total weighted population estimate being 19.5 million compared to 18.6 million on the old weight. Proportions are expected to only show small differences when previous tables are compared.

The weights have a mean value of 24 and range between 17 and 103. Higher weights are associated with people of Aboriginal and Torres Strait Islander origin and people who moved interstate between 2006 and 2011.

Estimation

Estimates of population groups are obtained by summing the weights of persons with the characteristic(s) of interest.

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SOURCES OF ERROR

All reasonable attempts have been taken to ensure the accuracy of the results of the longitudinal dataset. Nevertheless potential sources of error including sampling, linking and census quality error should be kept in mind when interpreting the results.

Sampling Error

Sampling error occurs because only a small proportion of the total population is used to produce estimates that represent the whole population. Sampling error refers to the fact that for a given sample size, each sample will produce different results, which will usually not be equal to the population value. There are two common ways of reducing sampling error - increasing sample size and utilising an appropriate selection method (for example, multi-stage sampling would be appropriate for household surveys). Given the large sample size for the ACLD (1 in 20 persons), and simple random selection, sampling error is minimal.

Linking Accuracy

False links can occur during the linkage process as even when a record pair matches on all or most linking fields, it may not actually belong to the same individual. While the methodology is designed to ensure that the vast majority of links are true, some are nevertheless false. The nature of the process used for the ACLD linkage means that while the links obtained are to a high degree of accuracy, some false links may be present within the ACLD dataset. There is an estimated 5% -10% false link rate in the ACLD.

For further detail on the accuracy of the linkage, see Australian Census Longitudinal Dataset, Methodology and Quality Assessment (cat. no. 2080.5).

Managing Census Quality

The ABS aims to produce high quality data from the Census. To achieve this, extensive effort is put into Census form design, collection procedures, and processing procedures.

There are four principle sources of error in Census data: respondent error, processing error, partial response and undercount. Quality management of the Census program aims to reduce error as much as possible, and to provide a measure of the remaining error to data users, to allow them to use the data in an informed way.

Respondent error

For most households in Australia, the Census is self-enumerated. This means that householders are required to complete the Census form themselves, rather than having the help of a Census collector. The Census form may be completed by one household member on behalf of others. Error can be introduced if the respondent does not understand the question, or does not know the correct information about other household members. Self-enumeration carries the risk that wrong answers could be given, either intentionally or unintentionally.

Processing Error

Much of the data on the Census form is recorded using automatic processes, such as scanning, Intelligent Character Recognition and other automatic processes. Quality assurance procedures are used during Census processing to ensure processing errors are kept at an acceptable level. Sample checking is undertaken during coding operations, and corrections are made where necessary.

Partial Response

When completing their Census form, some people do not answer all the questions which apply to them. While questions of a sensitive nature are generally excluded from the Census, all topics have a level of non-response. This can be measured and is generally low. In those instances where a householder fails to answer a question, a 'not stated' code is allocated during processing, with the exception of non-response to age, sex, marital status and place of usual residence. These variables are needed for population estimates, so they are imputed using other information on the Census form, as well as information from the previous Census.

Undercount

The goal of the Census is to obtain a complete measure of the number and characteristics of people in Australia on Census Night and their dwellings, but it is inevitable that a small number will be missed and some will be counted more than once. In Australia more people are missed from the Census than are counted more than once, thus the effect when both factors are taken into account is a net undercount.

For more detail see Managing Census Quality.

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DATA CONSISTENCY

A small percentage of linked records have inconsistent data, such as a different country of birth at the two time points or an age inconsistency of more than one year (when the expected five year difference is accounted for). Inconsistencies may be due to:

- reporting error - information for the same individual was reported differently in 2006 and 2011
- processing error - the value of a data item was inaccurately assigned or imputed during processing
- false link - the record pair does not belong to the same individual

In most analysis, the effect of inconsistent information has a very small impact. Characteristics from either the 2006 or 2011 data can be used in tables and some exploration of consistency over time will assist in drawing appropriate conclusions.

No data editing was applied to the file beyond that which had already taken place during the

relevant Census processing period. A set of consistency flags has been included on the ACLD file so that inconsistent data may be observed, quantified or excluded from calculations. Consistency flags, located in the Longitudinal group of data items, have been created for Census variables that would not be expected to change over time or have unlikely transitions over time. These are as follows:

- Age
- Birthplace of Person
- Birthplace of Male Parent
- Birthplace of Female Parent
- Sex
- Year of Arrival
- Number of Children Ever Born
- Registered Marital Status
- Highest Year of School Completed
- Level of Highest Non-School Qualification
- Country of Birth of Spouse or Partner
- Age of Spouse or Partner
- Indigenous Status

There are numerous ways to define consistency. The consistency flags have fine level categories to allow users flexibility in using their own definition of consistent or inconsistent. For example where one Census has 'not stated' for the year of arrival data item, a user can decide whether the record should be considered consistent or not. The same applies to where the response for one Census is 'not applicable'. The labels attached to each category suggesting consistency or inconsistency will assist the user in determining which records are consistent or inconsistent for their needs.

See also Longitudinal Data Items in the Data Items chapter.

INCONSISTENT REPORTING ON THE LINKED ACLD FILE, By selected characteristics

Characteristic	Proportion of linked records with inconsistent data between 2006 and 2011
	%
Age (within 1 year)	2.4
Sex	0.1
Birthplace of Person	2.1
Birthplace of Female Parent	4.0
Birthplace of Male Parent	4.4
Year of Arrival	16.5
Indigenous Status (either newly identified or previously identified as Aboriginal and/or Torres Strait Islander)	0.5
Registered Marital Status	0.7
Highest Year of School Completed	6.3
Level of Highest Non-School Qualification	14.9
Country of Birth of Spouse or Partner	2.7
Age of Spouse or Partner	7.9

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FILE STRUCTURE

The ACLD product in both TableBuilder and the ABSDL is a single-level file that counts persons and has data items for 2006 and 2011.

In TableBuilder, data items have first been separated by year of collection. Each data item for the person in 2006 has a corresponding item in 2011. In addition, data items that provide longitudinal information derived from both years, such as the consistency in reporting of certain data items between 2006 and 2011, is in a folder labelled 'Longitudinal' (see also Using the ACLD in TableBuilder). In addition to Census variables, there are three data items relating to migrants that have been made available via the Settlement Database from the Department of Social Services. These data items are only available for 2011.

For each year, data items are further divided into the following groups:

- **Geography** - geographic classifications on both a usual residence and place of enumeration basis.
- **Person** - person-level characteristics, covering demographic, culture and language, education, employment and unpaid work topics.
- **Dwelling Related** - derived from the characteristics of the dwelling in which the person was enumerated - e.g. type of dwelling.
- **Household Related** - derived from the characteristics of the household in which the person lives, provided the person was counted at home on Census Night - e.g. total weekly household income.
- **Family Related** - derived from the characteristics of the family in which the person lives, provided the person was counted at home on Census Night - e.g. age of youngest child in family.
- **Male Parent** - derived from information about the person's male parent, provided the parent was counted in the same family on Census Night - e.g. labour force status of male parent.
- **Female Parent** - derived from information about the person's female parent, provided the parent was counted in the same family on Census Night - e.g. labour force status of female parent.
- **Spouse/Partner** - derived from information about the person's spouse/partner, provided the spouse/partner was counted in the same family on Census Night - e.g. highest educational attainment of spouse/partner.

UNLINKED RECORDS

The ACLD file contains all records from the 2006 Census sample, both those that were linked to a 2011 record and those that were not. Records that were linked have information for 2006 and

2011. Records that were not linked have information for 2006 only.

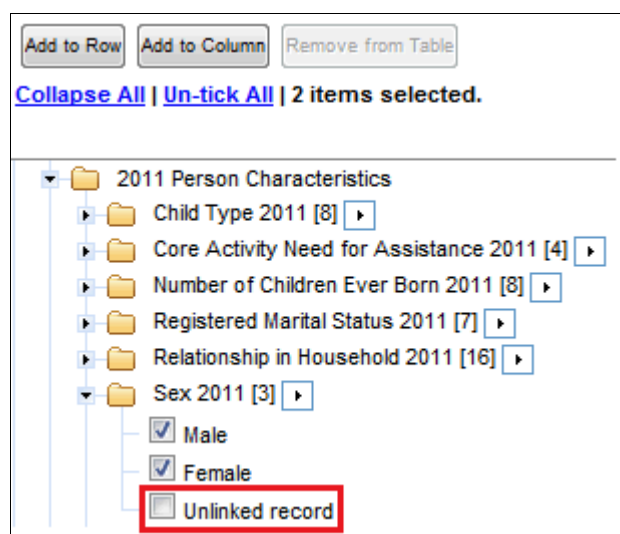
Data items for both 2006 and 2011 have a category labelled: **unlinked record**.

For 2011, the **unlinked record** category indicates the records from the 2006 Census that were not linked to a corresponding 2011 Census record. That is, these records have valid information for 2006 but none for 2011.

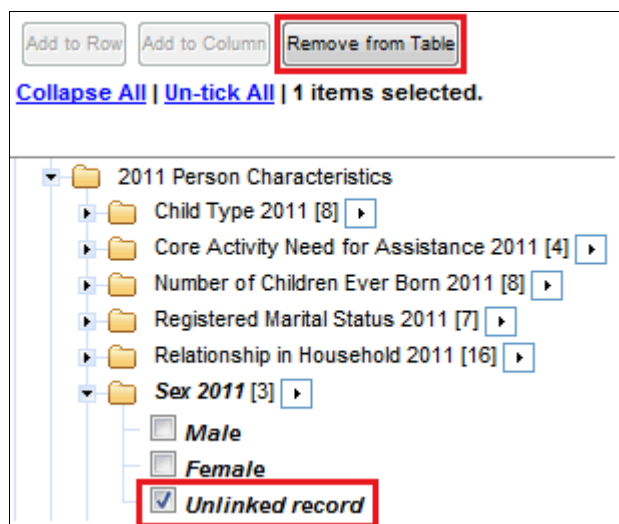
For 2006 data items, the **unlinked record** category is empty. It will take on a value in the future once the file has been augmented with an additional sample drawn from the 2011 Census. This will comprise children born and overseas arrivals between 2006 and 2011. It is designed to maintain the long-term viability of the ACLD and will be added as part of the third wave of the file which will incorporate the 2016 Census. Once this occurs, this category will indicate records for which there is valid information for 2011 but none for 2006.

Excluding Unlinked Records in TableBuilder

When using the weighted summation option in TableBuilder, no results will be returned for unlinked records in 2011 as weights were not applied to these records. Results will be returned if analysis is performed on unweighted data only. If desired, this category can be excluded from tables by ensuring that the 'unlinked record' category is deselected before each data item is added to the table. Such a table would produce a sample count corresponding to the equivalent table run with weights. Refer to the TableBuilder User Manual for more information on how to select data items for tables.



If the 'unlinked record' category is present on a data item that has already been added to a table, it can be removed by selecting this category within the relevant data item and then pressing the 'Remove from Table' button.



Note that removing any category, such as the 'unlinked record' category, from a table where data has already been generated will clear all data, meaning the table will need to be rerun.

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USING THE ACLD IN TABLEBUILDER

TABLEBUILDER USER MANUAL COUNTING UNITS AND WEIGHTS RELATIVE STANDARD ERROR CONFIDENTIALITY FEATURES IN TABLEBUILDER

TABLEBUILDER USER MANUAL

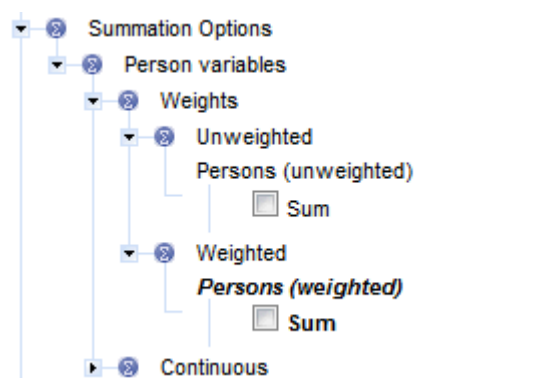
The TableBuilder User Manual is a comprehensive reference guide for the web interface of TableBuilder. It includes information on Getting started, Customised data and Interpreting results from ABS data.

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COUNTING UNITS AND WEIGHTS

Weighting is the process of adjusting results from a sample to infer results for the total population. To do this, a weight is allocated to each person. The weight is the value that indicates how many population units are represented by the sample unit.

Both the sample and weighted count options have been made available for the ACLD. It is therefore critical that weighted or unweighted counts are selected as appropriate when specifying tables. The following image shows the available Summation Options.



The default option used for the ACLD is weighted count. Weights should be used when making inferences about the longitudinal Australian population and will be the basis for most analyses. Uses for unweighted counts are generally limited to research into unlinked records and more sophisticated analysis for those seeking to understand the weighting methodology better or

wishing to apply their own weighting methods.

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RELATIVE STANDARD ERROR

While weighted counts are available in the ACLD TableBuilder, the Relative Standard Error will not be calculated for these counts due to the confounding effects of linking error present in the sample, which were not able to be quantified.

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CONFIDENTIALITY FEATURES IN TABLEBUILDER

In accordance with the Census and Statistics Act 1905, all the data in TableBuilder are subjected to a confidentiality process before release. This confidentiality process is undertaken to avoid releasing information that may allow the identification of particular individuals, families, households, dwellings or businesses.

Processes used in the ACLD in Tablebuilder to confidentialise records include the following:

- perturbation of data
- table suppression

Perturbation of data

To minimise the risk of identifying individuals in aggregate statistics, a technique is used to randomly adjust cell values. This technique is called perturbation. Perturbation involves small random adjustments of the statistics and is considered the most satisfactory technique for avoiding the release of identifiable statistics while maximising the range of information that can be released. These adjustments have a negligible impact on the underlying pattern of the statistics.

The introduction of these random adjustments result in tables not adding up. While some datasets apply a technique call additivity to give internally consistent results, additivity has not been implemented on the ACLD dataset. As a result, randomly adjusted individual cells will be consistent across tables, but the totals in any table will not be the sum of the individual cell values. The size of the difference between summed cells and the relevant total will generally be very small, as demonstrated below.

Persons (unweighted)	
Persons (unweighted) (x1)	
Sex 2011 ↑↓⊗⊕	↑↓
Male	390,467.0
Female	410,293.0
Total	800,759.0

(Sum of cells = 390,467 + 410,293 = 800,760. Difference of 1 relative to displayed total.)

Table suppression

Some tables generated within TableBuilder may contain a substantial proportion of very low

counts within cells (excluding cells that have counts of zero). When this occurs, all values within the table are suppressed in order to preserve confidentiality. The following error message displayed at the bottom of the table indicates when table suppression has occurred.
'ERROR: The table has been suppressed as it is too sparse'

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THE ACLD IN THE ABS DATA LABORATORY

The ABS Data Laboratory (ABSDL) is an interactive data analysis solution available for high end users who want to view and use ABS microdata without the system restrictions imposed in the Remote Access Data Laboratory (RADL). All output from ABSDL sessions is cleared by an ABS officer before it is released.

This tool allows users to run advanced multivariate statistical analyses, for example multiple regressions and structural equation modelling, using SPSS20, Stata13 and SAS9.3.

For more information about the ABSDL please see About ABSDL. To apply for access to the ACLD in the ABS Data Laboratory, please contact Microdata Access Strategies via microdata.access@abs.gov.au.

For more information about accessing the ACLD test file for the ABSDL, please see ABS Data Laboratory Test File.

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ABS DATA LABORATORY ACLD TEST FILE

The test file does not contain real data, and cannot be used for analysis.

A test file has been created for the ACLD microdata product. The purpose of the test file is to allow researchers/analysts to become familiar with the data structure and prepare code/programs prior to applying for, or commencing, an ABS Data Laboratory session. This aims to maximise the value of sessions by saving users' time and resources once they enter the ABS Data Laboratory environment.

The test file mimics the structure of the ACLD microdata - it has the same data items and allowed values, however, all data in the test file is false, created through a randomisation process. Proportions of values within data items in the test file will be similar to those in the real data; however, relationships between data items are not (intentionally) maintained. It is extremely unlikely that a record in the test file would match with a genuine record in the real data.

The test file is available as a free download from the Downloads tab. It can also be made available in other file formats on request, if required. For further information users should email microdata.access@abs.gov.au.

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DATA ITEMS

DATA ITEMS LIST

VISITORS ON CENSUS NIGHT

PERSONS TEMPORARILY ABSENT ON CENSUS NIGHT

NOT APPLICABLE CATEGORIES

NOT STATED CATEGORIES

LONGITUDINAL DATA ITEMS

DATA ITEMS LIST

A complete list of data items included on the ACLD file is provided in an Excel spreadsheet that can be accessed from the Downloads tab. The population applicable to each data item is described in the cell comments in this spreadsheet.

All data items are created at the person level. This includes data items relating to the family and household of the person selected in the sample. For ease of use, these data items have been divided into Person, Dwelling, Household, Family, Spouse Related, and Male and Female parent related groupings.

Users intending to subscribe to the TableBuilder product or use the microdata product in the ABS Data Laboratory should ensure the data they require, and the level of detail required, are available and applicable for the intended use.

The ACLD has been updated since its initial release to add several new data items along with improved derivations for select data items. For the 12 February 2016 update certain data items have been more finely disaggregated to expand analytical possibilities. For example, religious affiliation has been expanded to the three digit level and year of arrival in Australia is now in single years. In addition to new Census variables, such as Socio-Economic Indexes of Areas (SEIFA) and dwelling location, three new data items have been added from the Department of Social Services' Settlement Database that have been previously made available on the Australian Census Migrants Integrated Dataset (ACMID) TableBuilder file. To further enhance the file, a new weight replaced the previous weight to better account for net overseas migration between 2006 and 2011.

For further details on which data items have been updated please see the Data Item Changes document on the Downloads tab.

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VISITORS ON CENSUS NIGHT

Overseas visitors were excluded from the 2006 ACLD sample. The ACLD, however, does include visitors from within Australia in 2006 and/or 2011. These are people who were enumerated away from their usual residence on Census Night. Family information cannot be derived for these persons and as such all family, spouse, and male and female parent related data items are not applicable for visitors.

All dwelling related data items, however, have been made applicable to visitors. This information relates to their dwelling of enumeration on Census Night, not usual residence.

Most household data items are not applicable to visitors, however for four data items, visitors have been included in order to align to standard Census derivations of that data item. These comprise:

- Total Household Income as stated (weekly) of household in which person was enumerated
- Total Household Income (weekly) of household in which person was enumerated
- Household Income Derivation Indicator of household in which person was enumerated
- Household Composition of household in which person was enumerated.

Any applicable household information for a visitor relates to their place of enumeration, not usual residence.

Where a data item is also applicable to visitors, the usual address indicator data item for the relevant Census year can be used to restrict the table to usual residents only.

The cell comments available in the data item list provide precise information on who is, and is not, applicable for each data item.

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PERSONS TEMPORARILY ABSENT ON CENSUS NIGHT

The Census household form provides the opportunity to list up to three persons who were temporarily absent from the dwelling on Census Night. A limited amount of information is collected for these persons and it is used to better derive the family and household characteristics of the dwelling. In deriving family and household related data items for the ACLD, information on persons temporarily absent was included where relevant and available. Details are provided in cell comments in the data items list.

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NOT APPLICABLE CATEGORIES

Most data items in the ACLD include a 'not applicable' category. The definition of the 'not applicable' category, where relevant, is explained in cell comments for each data item in the data item list.

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NOT STATED CATEGORIES

'Not stated' categories occur when no response has been provided for a data item. All Census data items contain 'not stated' categories except for age, sex, marital status and usual address, as this information is imputed for these items.

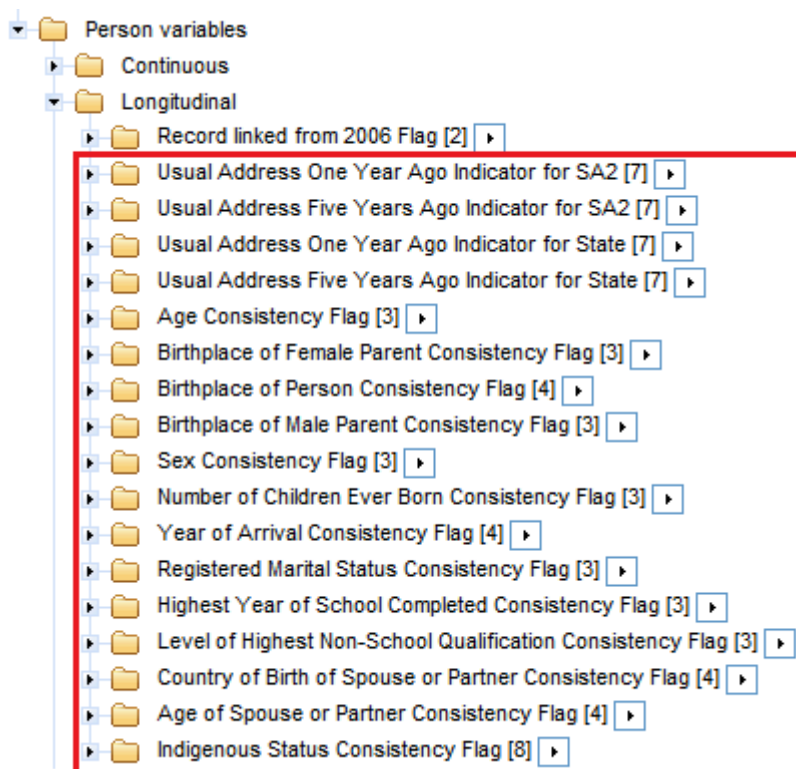
Other Census products commonly use the symbol '&' to denote a code value of 'not stated'. In the ACLD, the symbol 'X' or '97' has been used. The codes are listed in the data items list.

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LONGITUDINAL DATA ITEMS

The ACLD contains a number of data items that relate to the linkage over the period 2006 to 2011 and have been collectively named longitudinal data items. The first of these are consistency flags. These variables measure the consistency of reporting on linked records between 2006 and 2011. The following consistency flags can be found in the Longitudinal folder of the TableBuilder data item tree and in the ACLD microdata product available in the ABSDL:

- Age
- Birthplace of Person
- Birthplace of Male Parent
- Birthplace of Female Parent
- Sex
- Year of Arrival
- Number of Children Ever Born
- Registered Marital Status
- Highest Year of School Completed
- Level of Highest Non-School Qualification
- Country of Birth of Spouse or Partner
- Age of Spouse or Partner
- Indigenous Status



Consistency flags can be used with other variables. For example, age inconsistency can be cross tabulated with sex to examine potential gender differences in the reporting of age.

	Persons (weighted) (x1)		
Sex 2011	Male	Female	Total
Age Consistency Flag	↕	↕	↕
Age consistent within 0 years	94.55%	95.76%	95.16%
Age inconsistent within 1 year	2.72%	2.15%	2.43%
Age inconsistent from 2 to less than 5 years	0.80%	0.68%	0.74%
Age inconsistent from 5 to less than 10 years	0.66%	0.54%	0.60%
Age inconsistent by 10 or more years	1.28%	0.87%	1.07%
Total	100.00%	100.00%	100.00%

In addition to the consistency flags, a record linked from 2006 flag is also available in the Longitudinal folder. This flag can be cross tabulated with another data item to examine linkage rates (that is, the proportion of records linked). For example, cross tabulating the record linked flag with State/Territory of usual residence enables an examination of differences in linkage rates between the states and territories.

	Persons (unweighted) (x1)		
Record linked from 2006 Flag	2006 to 2011 record linked	2006 record not linked to 2011	Total
SA2 by Main ASGS Usual Residence 2006	↕	↕	↕
New South Wales	81.50%	18.50%	100.00%
Victoria	83.44%	16.56%	100.00%
Queensland	79.96%	20.04%	100.00%
South Australia	82.46%	17.54%	100.00%
Western Australia	81.34%	18.66%	100.00%
Tasmania	82.33%	17.67%	100.00%
Northern Territory	73.52%	26.51%	100.00%
Australian Capital Territory	84.52%	15.48%	100.00%
Other Territories	56.48%	43.52%	100.00%
Total	81.74%	18.26%	100.00%

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Australian Bureau of Statistics

2080.0 - Microdata: Australian Census Longitudinal Dataset, 2006-2011 Quality Declaration

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USER RESPONSIBILITIES

The Census and Statistics Act 1905 includes a legislative guarantee to respondents that their confidentiality will be protected. This is fundamental to the trust that the Australian public has in the ABS and that trust is in turn fundamental to the excellent quality of ABS information. Without that trust, survey respondents may be less forthcoming or truthful in answering our questionnaires. For more information, see 'Avoiding inadvertent disclosure' and 'Microdata' in How the ABS keeps your information confidential.

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TABLEBUILDER

In accordance with the Census and Statistics Act 1905, data in TableBuilder are subjected to a confidentiality process before release. The release of microdata must satisfy the ABS legislative obligation to release information in a manner that is not likely to enable the identification of a particular person or organisation. This confidentiality process is applied to avoid releasing information that may lead to the identification of individuals, families, households, dwellings or businesses.

Prior to being granted access to TableBuilder users must agree to the following ABS Terms and Conditions of TableBuilder Access:

- understand that the ABS has taken great care to ensure that the information on the survey output record file is correct and as accurate as possible and understand that ABS does not guarantee, or accept any legal liability whatsoever arising from, or connected to, the use of any material contained within, or derived from TableBuilder
- understand that all data extracted from the dataset through TableBuilder will be

confidentialised prior to being supplied and that as a result, no reliance should be placed on small cells as they are impacted by random adjustment, and respondent and processing errors

- users inform the ABS, through their Contact Officer, upon leaving their organisation so that their access is disabled
- not to provide their TableBuilder user ID and password access to any other person or organisation.

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ABS DATA LABORATORY

The ABS Data Laboratory (ABSDL) service is provided on a fully cost recovered basis, with a one-off set up cost, and a per session cost. The costs includes preparation of the desktop PC, maintenance of the client's access to a microdata product, as well as vetting of all output produced during the ABSDL session. Sessions are 3.5 hours or part thereof. Loading of different analytical packages may incur additional costs.

Access is provided to visiting users in a secure location within ABS premises. The ABSDL allows interactive (real time) access to the microdata files. There are no limitations on what unit record or summary information a user can view within an ABSDL, and users are allowed to produce graphical outputs. Users are supervised at all times and must not bring mobile phones, cameras, USB keys, laptops, palm pilots or similar transmission or storage devices into the secure location. All outputs produced by users in ABSDL are manually cleared for release after the session.

For more information on the ABSDL, please refer the About the ABS Data Laboratory page on the ABS website.

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CONDITIONS OF SALE

All ABS products and services are provided subject to the ABS Disclaimer, ABS Copyright, ABS Privacy and ABS Conditions of Sale.

Any queries relating to these Conditions of Sale should be emailed to intermediary.management@abs.gov.au.

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PRICE

Microdata access is priced according to the ABS Pricing Policy and Commonwealth Cost Recovery Guidelines. For details refer to ABS Pricing Policy on the ABS website. For microdata prices refer to the Microdata prices web page.

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HOW TO APPLY FOR ACCESS

Clients wishing to access the microdata should read the How to Apply for Microdata web page.

Clients should familiarise themselves with the User Manual: Responsible Use of ABS CURFs and/or the User Manual: TableBuilder, depending on the product or products being accessed.

Other related microdata information is available via the Microdata web pages.

To apply for access to the ACLD in TableBuilder, register and apply in the Registration Centre.

To apply for access to the ACLD in ABS Data Laboratory, please contact Microdata Access Strategies via microdata.access@abs.gov.au.

Further information on access steps can be found on the How to Apply for Microdata page on the ABS web site.

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AUSTRALIAN UNIVERSITIES

The ABS/Universities Australia Agreement provides participating universities with access to a range of ABS products and services. This includes access to microdata.

For further information, university clients should refer to the ABS/Universities Australia Agreement web page.

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FURTHER INFORMATION

The Microdata Entry page on the ABS website contains links to microdata related information to assist users to understand and access microdata.

For further information users should email microdata.access@abs.gov.au or telephone (02) 6252 7714.

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Australian Bureau of Statistics

2080.0 - Microdata: Australian Census Longitudinal Dataset, 2006-2011 Quality Declaration

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ABOUT THIS RELEASE

In the 2006-2011 Australian Census Longitudinal Dataset (ACLD), a 5% random sample from the 2006 Census has been linked to records from the 2011 Census to build a longitudinal picture of Australian society. Users intending to subscribe can access a detailed list of data items from the Downloads tab to ensure the data they require, and the level of detail required, are available and applicable for the intended use.

The following microdata products are available:

- ACLD in TableBuilder
- ACLD in ABS Data Laboratory

Apply online for access to ACLD in:

- TableBuilder at <https://www.abs.gov.au/registration>
- ABS Data Laboratory at <https://www.abs.gov.au/about/microdata>

For more information about:

- TableBuilder refer to <https://www.abs.gov.au/ausstats/abs@.nsf/mf/1406.0.55.005>
- ABS Data Laboratory refer to: [https://www.abs.gov.au/websitedbs/D3310114.nsf/home/CURF:+About+the+ABS+Data+Laboratory+\(ABSDL\)](https://www.abs.gov.au/websitedbs/D3310114.nsf/home/CURF:+About+the+ABS+Data+Laboratory+(ABSDL)).

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Australian Bureau of Statistics

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This document was added or updated on 02/07/2015.

HISTORY OF CHANGES

22/03/2016 - An ACLD test file has been included, to assist ABS Data Laboratory users.

This test file will allow users to generate and test code prior to commencing a session in the ABS Data Laboratory. For more information, please see the ABS Data Laboratory Test File page.

12/02/2016 - The ACLD has been re-released in both TableBuilder and the on-site ABS Data Laboratory with a number of enhancements.

In TableBuilder

- three data items (Visa Type, Location of Visa Application, and Applicant Status) added from the Settlement Database that were made available in the Australian Census Migrants Integrated Dataset (ACMID) TableBuilder file;
- additional Census variables, such as Socio-Economic Indexes for Areas (SEIFA) and dwelling location;
- more finely disaggregated data items, for example, year of arrival in Australia in single years and religious affiliation at the three digit level;
- refinements to the consistency flags; and
- a revised weight (replacing the original weight) to better account for net overseas migration between the 2006 and 2011 Census Nights. Users who have analysed the ACLD prior to 12 February 2016 may notice changes to estimates produced with the revised weight. Estimates of population groups will be different with the total weighted population estimate being 19.5 million compared to 18.6 million on the old weight. Proportions are expected to only show small differences when previous tables are compared.

In the ABS Data Laboratory

- variable names changed to be more intuitive;
- refinements to the consistency flags; and
- a revised weight (replacing the original weight) to better account for net overseas migration between the 2006 and 2011 Census Nights.

03/12/2015 - The ACLD file available for use through the on-site ABS Data Laboratory has been updated.

This updated version includes three new data items relating to migrants that have been made

available via the Settlement Database from the Department of Social Services.

An update of the ACLD TableBuilder file and the ACLD ABS Data Laboratory file is planned for the near future.

02/07/2015 - The ACLD is now available as a unit record file that can be accessed through the on-site ABS Data Laboratory network in ABS offices throughout Australia. For further information please contact microdata.access@abs.gov.au

This new ACLD Microdata Product features some revisions to the original dataset released in TableBuilder in December 2013:

- categories of several data items have been expanded to match the level of disaggregation available in Census TableBuilder
- additional Census data items (including Socio-Economic Indexes for Areas) have been added
- weights have been revised to take better account of migration between 2006 and 2011

To maintain consistency it is planned to release these updates to the ACLD TableBuilder file in the near future.

This page last updated 5 March 2018

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GLOSSARY

Terms and definitions applicable to the ACLD can be located via the Census Dictionary Glossary. Additional information on data items is also available in the associated cell comment within the Data Items list. This is available via the Downloads tab.

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ABBREVIATIONS

ABS	Australian Bureau of Statistics
ABSDL	Australian Bureau of Statistics Data Laboratory
ACLD	Australian Census Longitudinal Dataset
ACMID	Australian Census Migrants Integrated Dataset
ASGS	Australian Statistical Geography Standard
CURF	Confidentialised Unit Record File
ERP	Estimated Resident Population
SA2	Statistical Area 2

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QUALITY DECLARATION

INSTITUTIONAL ENVIRONMENT

RELEVANCE

TIMELINESS

ACCURACY

COHERENCE

INTERPRETABILITY

ACCESSIBILITY

INSTITUTIONAL ENVIRONMENT

The Australian Census Longitudinal Dataset (ACLD) is released in TableBuilder and as a microdata product in the ABSDL. Microdata files are released in accordance with the conditions specified in the Statistics Determination section of the Census and Statistics Act 1905. This ensures that confidentiality is maintained whilst enabling micro level data to be released. More information on the confidentiality practices associated with TableBuilder can be found on the Confidentiality page. To protect confidentiality of data within the ABSDL, users are supervised at all times and must not bring mobile phones, cameras, USB keys, laptops, palm pilots or similar transmission or storage devices into the secure location. All outputs produced by users in ABSDL are manually cleared for release after the session.

For information on the institutional environment of the Australian Bureau of Statistics (ABS), including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, see [ABS Institutional Environment](#).

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RELEVANCE

Data for the Census of Population and Housing used in this product were collected on 8 August 2006 and 9 August 2011. The scope of the Census is all persons enumerated in Australia on Census night excluding certain diplomatic personnel of overseas governments. In addition persons who were overseas visitors on Census Night were excluded from the scope of the 2006 ACLD sample.

The Census collects information on demographics, income, labour force, unpaid work, dwelling characteristics and family and household relationships.

For more information, see [How Australia Takes a Census, 2011 \(cat. no. 2903.0\)](#).

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TIMELINESS

The Census of Population and Housing is conducted every five years. For further information see the publication [How Australia Takes a Census, 2011](#).

The first wave of Census data for the ACLD was from 2006 and the second from 2011. It is envisaged that the 2016 Census and subsequent Censuses will be added in the future, as well as administrative data sets.

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ACCURACY

The ACLD was created using data linkage techniques without name and address but with other characteristics from the Census. It was based on a 5% random sample from the 2006 Census (979,661 records) of which 82% (800,759) were linked to a 2011 Census record. The false link rate is estimated at around 5-10%.

Sampling error occurs because only a small proportion of the total population is used to produce estimates that represent the whole population. Sampling error refers to the fact that for a given sample size, each sample will produce different results, which will usually not be equal to the population value. There are two common ways of reducing sampling error - increasing sample size and utilising an appropriate selection method (for example, multi-stage sampling would be appropriate for household surveys). Given the large sample size for the ACLD (1 in 20 persons), and simple random selection, sampling error is minimal.

The ACLD sample was weighted to the Estimated Resident Population in scope of both the 2006 and 2011 Censuses. The weights adjust for missed links and Census undercount.

Information on methodology, linkage quality and weighting can be found in Information Paper: Australian Census Longitudinal Dataset - Methodology and Quality Assessment, 2006 and 2011 (Cat. No. 2080.5). Information on the weighting of the ACLD has since changed with the update of the ACLD file that was released on 11 February, 2016. For information on the current weighting please see the Sample Methodology section of this publication.

Steps are taken to confidentialise the data made available on TableBuilder in such a way as to maximise the usefulness of the content while maintaining the confidentiality of respondents selected in the ACLD sample. As a result it may not be possible to exactly reconcile all the statistics produced from the microdata with other published statistics. Further information about the steps taken to confidentialise the microdata can be found in [TableBuilder confidentiality](#).

Estimates of migrants in the ACLD using the Settlements Database (SDB) information may differ from the estimates produced in the ACMID for several reasons:

- the ACLD is a 5% random sample from the 2006 Census population, not the 2011 Census population;
- more recent migrants, that is, those that arrived between the 2006 and 2011 Censuses, are not included in the sample;
- linked records in the ACLD were benchmarked to the population that was in scope of both the 2006 and 2011 Censuses;
- the SDB information was merged to the 2011 Census records of people that were able to be linked (and not all records were able to be linked).

Due to these reasons above and other quality issues in the ACLD, estimates of migrants using the SDB information should generally be treated with caution.

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COHERENCE

The ACLD microdata contains a large number of data items and in some cases the level of detail has been collapsed from that described in the Census Dictionary. For more information on the level of detail provided, please see the associated data item list.

While the 2006 and 2011 Censuses had predominantly the same questions and were processed in a similar way, there were some differences between them.

Notable data items that are different between Census years are personal, family and household income. Income was collected in ranges and these ranges are different in different Census years. The ACLD does not include an adjustment to income data for inflation.

Some data items were derived differently between Censuses. To aid comparability, the 2006 variable was re-derived to make it consistent with the 2011 derivation.

2006 Geography was originally disseminated according to the Australian Statistical Geography Classification. There were radical changes in the geography standard between 2006 and 2011 leading to the formation of the Australian Statistical Geographic Standard. In order to facilitate comparison, a 'best fit' of 2006 collection districts to align with the 2011 geographic boundaries was created, however in some cases this will be an approximation only.

The exception is Remoteness Areas where no adjustment was made and 2006 boundaries and definitions were applied for usual address for that time period.

For more information on the differences between the 2006 and 2011 Census see [What's new for 2011?](#)

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INTERPRETABILITY

This publication should be referred to when using the microdata. It contains information on the Sample Methodology, File Structure, Using the ACLD in TableBuilder, The ACLD in the ABS Data Laboratory, Conditions of use and the Data items list.

Detailed information on methodology, linkage quality and weighting can be found in Information Paper: Australian Census Longitudinal Dataset - Methodology and Quality Assessment, 2006 and 2011 (Cat. No. 2080.5). Information on the weighting of the ACLD has since changed with the update of the ACLD file that was released on 11 February, 2016. For information on the current weighting please see the Sample Methodology section of this publication.

The ABS publishes extensive information on Census Data Quality.

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ACCESSIBILITY

The Australian Census Longitudinal Dataset, 2006-2011 can be accessed through TableBuilder and the ABS Data Laboratory.

This microdata product is available to approved users. Users wishing to access the microdata should read the How to apply for Microdata web page, before applying for access through the Registration Centre. Users should also familiarise themselves with information available via the Microdata web pages.

Any questions regarding access to microdata can be forwarded to microdata.access@abs.gov.au or phone (02) 6252 7714.

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